Indiana Bat Project Review Fact Sheet
New York Field Office

The following fact sheet is intended to provide information to assist with the review of projects which occur within the likely range of the Indiana bat (*Myotis sodalis*) within the State of New York. The Indiana bat is Federally- and State-listed as an endangered species.

The Indiana bat is known to winter in six counties in New York State. While the U.S. Fish and Wildlife Service (Service) has learned a great deal about the wintering population with standardized biennial counts organized by the New York State Department of Environmental Conservation (NYSDEC) Endangered Species Unit, we are continuing to study Indiana bat migratory patterns and summer habitat use within the State.

In the Northeast, multiple State and Federal agencies are investigating Indiana bat movements; the most recent studies of bats from hibernacula in Essex and Ulster Counties, New York, provide additional information. In the spring of 2002 through 2006, the NYSDEC successfully tracked female Indiana bats from their hibernacula in Essex, Ulster, Jefferson, Onondaga Counties to their spring roosts, distances up to approximately 40 miles, however they are capable of flying distances much greater than that.

The Indiana bat typically hibernates in caves/mines in the winter and roosts under bark or in tree crevices in the spring, summer and fall. Suitable potential summer roosting habitat is characterized by trees (dead, dying, or alive) or snags, greater than or equal to 5 inches diameter breast height (d.b.h.) with exfoliating or defoliating bark, or containing cracks or crevices that could potentially be used by Indiana bats as a roost. However, maternity colonies generally use trees greater than or equal to 9 inches d.b.h. Overall, structure appears to be more important than a particular tree species or habitat type. Females appear to be more habitat specific than males presumably because of the warmer temperature requirements associated with gestation and the rearing of young. As a result, they are generally found at lower elevations than males may be found. Roosts are warmed by direct exposure to solar radiation, thus trees exposed to extended periods of direct sunlight are preferred over those in shaded areas. As larger trees afford a greater thermal mass for heat retention, they appear to be preferred over smaller trees. Additional information on potentially suitable summer habitat can be found on our website at http://www.fws.gov/northeast/nyfo/es/ibatdraft99.pdf.

Streams, associated floodplain forests, and impounded water bodies (ponds, wetlands, reservoirs, etc.) provide preferred foraging habitat for Indiana bats, some of which may fly up to 2-5 miles from upland roosts. Indiana bats also forage within the canopy of upland forests, over clearings with early successional vegetation (*e.g.,* old fields), along the borders of croplands, along wooded fencerows, and over farm ponds in pastures (U.S. Fish and Wildlife Service 1999). While Indiana bats appear to forage in a wide variety of habitats, they seem to tend to stay fairly close to tree cover.

To determine whether the proposed project site may provide roosting or foraging habitat for the Indiana bat, please read through the following questions:

1. Is your project within a County identified by the Service as known or likely to contain Indiana bats?

- If no, no further coordination regarding the Indiana bat is necessary at this time.

- If yes, proceed to Step 2.

2. Is your project at an elevation of ≤900 feet above sea level (the maximum elevation we have observed Indiana bat maternity colonies-use in New York State)?
- If no, no further coordination regarding the Indiana bat is necessary at this time.
- If yes, proceed to Step 3.

3. Are there forested (upland or wetland) habitats present within the proposed action area?
- If no, no further coordination regarding the Indiana bat is necessary at this time.
- If yes, proceed to Step 4.

4. Does the proposed project involve any disturbance of forested (upland or wetland) habitat or any mine(s)/cave(s) that could serve as a hibernaculum?
- If no, no further coordination regarding the Indiana bat is necessary at this time.
- If yes, the project site should be evaluated and described by a qualified person as to the presence, amount, and distribution of suitable summer roosting/maternity and foraging habitat and any information on caves/mines should be provided.

The type of information that would be helpful to include in any evaluation are:
- a detailed project description,
- a map (and summary table) of the proposed project area with coarse habitat cover types (*e.g.*, emergent wetland, open field) in acres
- a summary table of the proposed amount of disturbance to each habitat type
- an overlay of new construction on the habitat map
- a description of the forested habitat onsite, including the type of forest (*e.g.*, oak-hickory), approximate stand age, and presence of dead or live trees with split branches or trunks or exfoliating bark
- photographs representative of all cover types on the site and encompassing views of the entire site
- a topographic map with the project area identified

Staff from our office may be available to assist with an initial site visit to determine whether additional detailed habitat analyses or surveys for Indiana bats will continue to be recommended, however, due to current workload, it may be months before a site visit is possible.

Should potential habitat be present and proposed for disturbance, the Service (and/or applicant or involved Federal agency) will need to determine the likelihood of Indiana bat presence (see discussion of mistnetting below) and evaluate the potential impacts of the proposed project on the Indiana bat.

We do have some recommendations to minimize the likelihood of adverse impacts that we can provide at this early stage should you wish to incorporate them into your project. Our standard recommendation to avoid any potential for directly killing Indiana bats is to conduct clearing of potential roost trees from October 1 through March 31 (when >5 miles from an hibernaculum); when <5 miles from an hibernaculum we recommend conducting clearing from November 15 to March 31. In many cases, where habitat is of low quality/quantity, seasonal cutting may be sufficient to avoid impacts to the species. Also, there may be cases when we believe the likelihood of impacts is low regardless of when tree removal occurs. Please note that the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) does not prohibit the clearing of trees and the Service's primary goal is not the protection of every tree.

However, the ESA does prohibit the "take" (to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct) of Federally-listed species, such as the Indiana bat, and our recommendations are intended to help applicants and Federal agencies avoid or minimize the risk of "taking" an Indiana bat.

In addition to having concerns about direct impacts to Indiana bats, we are also concerned about the cumulative loss of habitat for the species. Therefore, we recommend protecting potential Indiana bat habitat within proposed projects to the greatest extent possible. In some cases, especially in areas where significant quantity/quality of Indiana bat habitat is present and proposed to be impacted, mist net or other surveys may be warranted to determine if bats are present onsite. Due to the limited time frame when bat surveys can be completed (see http://www.fws.gov/northeast/nyfo/es/ibatdraft99.pdf for recommended protocols), it is strongly recommended that the applicant contact the Service as early as possible in the project planning to determine if surveys or additional avoidance and/or minimization measures will be necessary to avoid project delays. If netting is conducted at a site, we encourage the attachment of radio transmitters on any captured Indiana bats to help understand how the proposed project site is being used by Indiana bats.

The project's environmental documents should identify project activities that might result in adverse impacts to the Indiana bat or their habitat. Information on any potential impacts and the results of any recommended habitat analyses or surveys for the Indiana bat should be provided to this office and they will be used to evaluate potential impacts to the Indiana bat or their habitat, and to determine the need for further coordination or consultation pursuant to the ESA.

References:

U.S. Fish and Wildlife Service. 1999. Agency Draft Indiana Bat (*Myotis sodalis*) Revised Recovery Plan. Fort Snelling, MN: U.S. Department of the Interior, Fish and Wildlife Service, Region 3. 53 p.